CHAPTER 10

AUTOMATED SUPPLY PROCEDURES

In the previous chapters, we covered the various functions of the manual supply procedures. Now we will discuss how automation plays an important role in shipboard supply procedures. A few aspects of the Shipboard Nontactical ADP Program (SNAP) will be discussed. This system is designed to improve shipboard efforts in the area of supply and OPTAR accounting through automation.

The majority of the fleet is automated with SNAP. There are two different systems of SNAP, known as SNAP I and SNAP II. Both of these systems are covered in this chapter.

AUTOMATED SUPPLY

The concept of automated supply involves making information on material, requisitions, accounting, and various files (that were maintained manually) easier and more accurate to use. By putting this information into a computer, you are able to retrieve all the needed information on records. The Navy developed two systems called SNAP I and SNAP II for the fleet. SNAP I was developed for the larger ships, such as CVs, CVNs, ADs, AFSs, ARs, ASs, LHAs, LPHs, and some shore intermediate maintenance activities (SIMAs). SNAP II was developed for the rest of the fleet from battleships to submarines.

These two systems are consistently changing with each passing year through updates. Automation is here and it can make the workload easier for you. For an SK to really understand how SNAP I and SNAP II work, he or she should have a good working knowledge of the manual system. Although the SK A school teaches the manual system, the last week will be used to teach, with hands on, either SNAP I or SNAP II, depending on the individual's orders.

INTRODUCTION TO SNAP

SNAP is the Navy's plan to automate records for both small and large ships and marine aircraft groups (MAGs). SNAP provides hardware and software to all Navy ships, shore installations, and MAGs throughout the United States and overseas. The automated data processing hardware is comprised of the Honeywell DPS6s (AN/UYK-65[V]) and the Harris 300 (AN/UYK-62[V]) for the SNAP I and SNAP II systems respectively. Resident computer programs or software allow for faster and more accurate processing of administrative, maintenance, supply and logistics, and financial records.

SYSTEMS INTERFACE

When fully implemented, SNAP I systems will be able to interface among themselves and with other systems. Although SNAP I software is not compatible with the SNAP II hardware of smaller Navy ships, these two computer systems will be able to communicate with each other through various media types, such as floppy disks, punched paper tape, and magnetic tape. The advent of SNAP has moved shipboard information processing from a manually controlled environment to a real-time, computer-housed environment. This transition can help activities maintain accurate records and allow more timely and simple communication with other commands.

SNAP I SYSTEM CONCEPT

The SNAP I system concept takes in a lot of areas, from the subsystems down to the reports the system will generate. Some of the areas to be briefly explained are the applications systems, hardware configuration, real-time (RT) concept, security, and the subsystems.

The objectives of SNAP I are to reduce current shipboard manual workload associated with maintenance management, supply and finance, personnel administration, and other shipboard functions. It provides users with a responsive and flexible facility for the management of the various functions. The system will improve the accuracy and timeliness of your existing off-ship data reporting without increasing your workload.

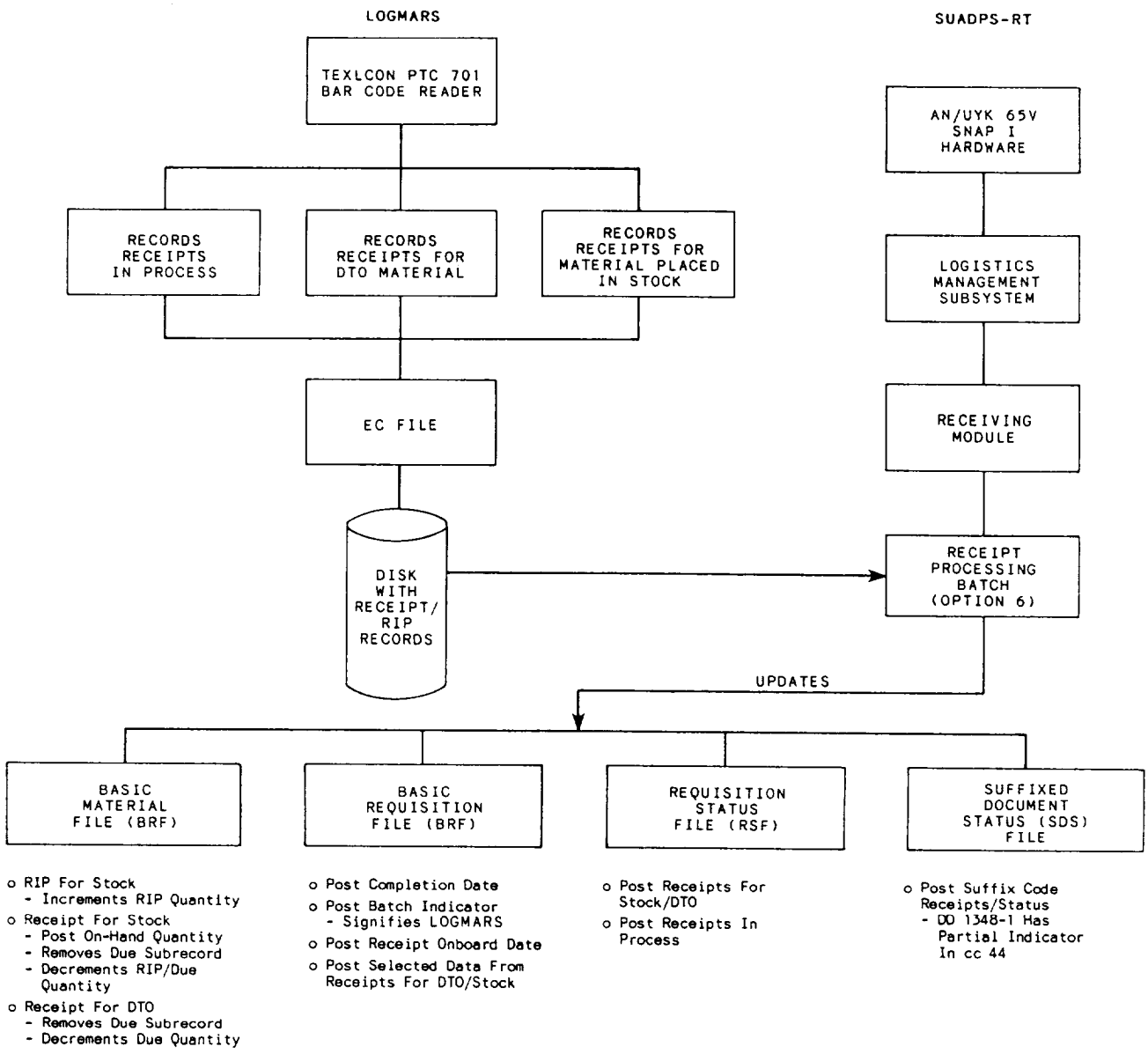

Figure 10-1.—LOGMARS/SUADPS-RT interface.

APPLICATIONS OF SNAP I

The following SNAP I systems will be explained: maintenance applications, administrative applications, and supply and financial applications.

Maintenance Applications

Intermediate Maintenance Management Systems-Real Time (IMMS-RT) and Organization Maintenance Systems-Real Time (OMMS-RT) are both used to manage maintenance on SNAP I ships and SIMAs. IMMS-RT, OMMS-RT, and Naval Aviation Logistics Command Management Information System (NALCOMIS) all interface (or communicate) with the Shipboard Uniform Automated Data Processing System-Real Time (SUADPS-RT).

Administrative Applications

The Administrative Data Management (ADM) system of SNAP I is designed to maintain your ship's recordkeeping and reporting requirements for manpower and system management. The other

application is known as Source Data System Afloat (SDSA). This system is primarily designed to maintain personnel records and process payroll. The SDSA can also process other information such as recording leave, starting or stopping family separation pay, hazardous duty pay, and various other functions.

Supply and Financial Applications

The SUADPS-RT and the Logistics Applications of Automated Marking and Reading Symbology (LOGMARS) are the two primary applications for supply and financial management. The interface between these two systems is shown in figure 10-1.

SNAP I HARDWARE CONFIGURATION

The SNAP I hardware configuration is known as the AN/UYK-65(V), which is made up of several Honeywell DPS6 computers. Various pieces of peripheral equipment such as magnetic tape drives, disk storage equipment, keyboard display video terminals (KDVTs), and ASPI printers are used to communicate either interactively within the commands or between external commands. The specific configurations of hardware depend upon an activity's uniform system identification code. This can change with implementation of new automated information systems. An illustration of one type of a configuration for an aircraft carrier is shown in figure 10-2. There is more than one type of configuration for an aircraft carrier.

Networking

Networking is the process that allows for communication between computers. An example of this is accessing information that is contained on a host computer from a remote processing system (RPS).

Host Computer

The host computer is the main computer. This is also the computer that contains the majority

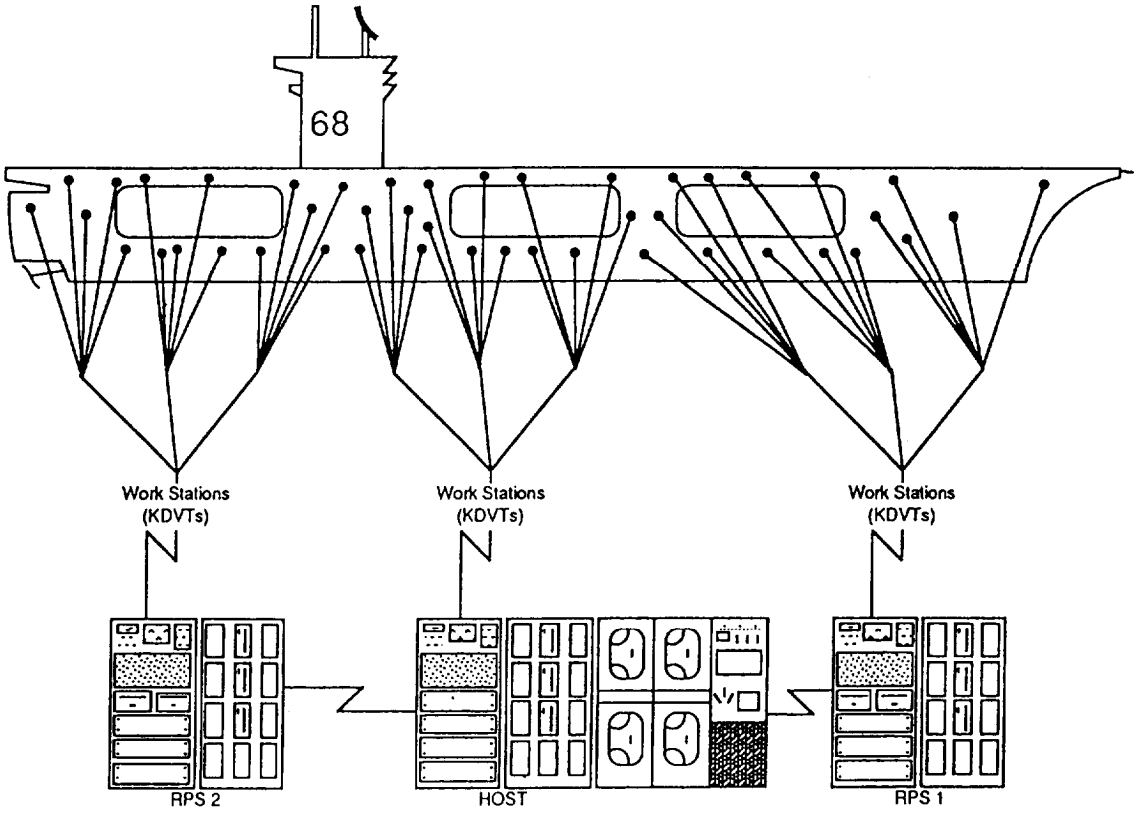

Figure 10-2.—SNAP I configuration on an aircraft carrier.

of SUADPS-RT data base files and performs most of the functions. The host computer is connected to the RPS via networking.

Remote Processing System

The major function of the RPS is to allow additional users to access the host system by using smaller remote computers. You can add as many as 15 different users per RPS station and consequently acquire the degree of intercommunication or networking desired.

REAL-TIME CONCEPT

Updating records at the time a transaction is entered is commonly referred to as working in a real-time environment. In SUADPS-RT, this would happen when you are entering a receipt for stock at a terminal; the quantity is posted to the on-hand quantity in the Basic Material File (BMF), the requisition completion date and receipt are posted to the Basic Requisition File (BRF), and the due quantity is removed from the BMF. Previously, SUADPS worked as a batch process (running mass transaction updates) system to post transactions to the files only at user predetermined times.

SECURITY FOR SNAP I

As safeguards against unauthorized users, the AN/UYK-65(V) provides two types of security. These safeguards are called system security and application security.

System Security

System security is provided in the form of computer passwords. Honeywell software provides the SNAP systems coordinator the capability to require passwords in conjunction with user IDs. This is designed to prevent unauthorized users access to the Honeywell operating system. Such access allows movement within volumes, directives, files, and command language. The only ship's personnel who are authorized these types of abilities are automated data processing (ADP) personnel.

Application Security

Functional application systems, such as SUADPS-RT, IMMS-RT, ADM, and others, provide security control in the form of a LOGON ID. Each LOGON ID is assigned by the respective functional area supervisor and limits the range of subsystems within which the user can work.

SUADPS-RT MANAGEMENT SUBSYSTEMS

Before supply personnel can use the SUADPS-RT, the ADP division must bring the system on line by executing the SNAP I distributed application generation (GEN) program. This program gathers system files and makes them available to the SUADPS-RT processing programs. As a general rule, ADP will keep the GEN up at all times except for short periods at night to print reports and save all the files. With the GEN up, authorized SUADPS-RT users can log on and process all transactions and functions to which they have been granted access.

SUADPS-RT is divided into four application subsystems plus an executive subsystem. The executive subsystem provides controls, allows centralization of common functions, and serves as the primary interface with the user. Figure 10-3 illustrates the basic functions available under each of the SUADPS-RT subsystems. Complete information concerning the functions, screens, and detailed procedures for each of the SUADPS-RT subsystems described in the following paragraphs can be found in the *SUADPS-RT Support Procedures Manual,* volumes I, II, and III. This manual is found on board ships with a SNAP I system and at SIMAs.

Logistics Management Subsystem

This subsystem contains programs to order DTO material, receive and issue stock, query system files, track DLR carcasses, and maintain control and validation files. Management functions include suspense processing, requisition file monitoring and history processing, and various logistics reports related to requisition files.

Inventory Management Subsystem

This subsystem contains programs to establish and update material files and process inventories, reorders, and off-loads. Management functions include demand processing, excess cancellation requests, SEAMART and PEB item reviews, and packup management.

LOGISTIC	INVENTORY	FINANCIAL	BATCH
• Processing Stock/DTO Material Requests • Physical Material Receipt Issue, and Storage • Query system files • Track DLR carcasses • Manage suspense processing • Monitor requisition file priority processing • Document Control/Screening • IMA Material Requests • Maintenance of Nonprivileged Validation Tables • Maintenance of SUADPS-RT Validation Files • Material File Maintenance • Material Turn-In • MDS Processing • Internal/External MOVs • NIS Review • Quality Assurance • Requisition File Maintenance Requisition Release • SUADPS-RT Access/Security • External Record Release	• Processing Inventories • Processing Off-loads • Processing Reorders • Establish and update material files, • Manage SEAMART/PEB reviews • Manage packups • Processing Excess Cancellation Requests • Allowance Processing • AVCAL Maintenance • COSAL Maintenance • Load List Updating Tape Processing • Local Change Notice Processing • Location Changes • Processing SAMMA/SAL Report • Processing Storeroom Audits • Demand History Processing • Demand Recording	• Record OPTAR Allotments/Withdrawals • Process Financial Adjustments • Update Appropriation Data • Produce OPTAR and Financial Inventory Reports • Performance Monitoring • Quality Assurance	• Processing large volume of incoming transactions that cannot (or need not) be processed interactively • Performance Monitoring • Report Generation (Request Prioritization, Distribution) • Processing Incoming Status • COSAL/AVCAL Allowance Processing • Change Notice Processing

Figure 10-3.—Primary functions to subsystems.

Financial Management Subsystem

This subsystem contains programs to record OPTAR allocations, process financial adjustments, update appropriation data, and produce OPTAR and SAC 207 financial reports.

Incoming Batch Transaction Subsystem

This subsystem is provided for large volumes of incoming transactions that cannot be processed interactively within the command. Data in this category includes monthly change notice actions from FMSO, Mechanicsburg, Pennsylvania, and incoming requisition status or COSAL aids from SPCC, Mechanicsburg, Pennsylvania. This data may be received in the form of magnetic tape or diskette, punched cards, or punched paper tape.

SNAP II SYSTEM CONCEPT

The idea for SNAP II is to make it easier for shipboard personnel to manage their records and files. The system has numerous functions that may be accessed via menu displays. The first ship to be implemented with SNAP II was USS *Sides* (FFG-14) in 1982. This system was written based on the NAVSUP P-485.

If you have a good understanding of how the manual supply procedures work, you will not have any trouble using SNAP II. It will free up your personnel to be able to do other types of supply work.

SNAP II is composed of various subsystems that are briefly covered next. This system is the easiest to understand and use.

SNAP II SUBSYSTEMS

The SNAP II subsystem is made up of several subsystems that are joined under the control of a Harris 300 AN/UYK-62(V) minicomputer. This automated information system is designed to provide administrative support in the functional areas of surface maintenance, supply, and personnel operations.

SNAP II supports these functions across a wide range of afloat units including submarines, destroyers, frigates, cruisers, battleships, amphibious warfare ships, and auxiliaries. Various SNAP II equipment configurations required to

meet space and organizational requirements peculiar to individual units are also supported.

System Management System Subsystem

The System Management System (SMS) subsystem of SNAP II performs system management and system service tasks in support of the other functional subsystems of SNAP II. SMS shipboard functions are of three types:

1. Functions accessed by the user from the SMS menu
2. Functions accessed by one subsystem from another subsystem
3. The SNAP II system menu function that provides a common entry point to SNAP II for all users

The SMS is responsible for protecting system data integrity by providing backup, recovery, and transaction logging functions. Output queue management is supported as well as the system on-line users manual. Figure 10-4 shows the main menu encountered upon entering the SNAP II system.

Maintenance Data System Subsystem

The Maintenance Data System (MDS) subsystem provides support for on-line interactive 3-M Systems for SNAP II ships. The MDS and the Supply and Financial Management (SFM) subsystems are the only two that are specifically related to each other, in that, as a maintenance person you can order supply parts through the MDS.

This subsystem includes 3-M functions related to the Current Ship's Maintenance Project (CSMP) master data base. This data base consists of Maintenance Data Collection System (MDCS) actions, Configuration Change (CK) actions, and Ship's Force Work List (SFWL) actions. The MDS provides the following capabilities:

1. Management of CSMP actions, including adding, closing, changing and displaying, and maintenance actions
2. Trouble log processing
3. Equipment calibration and testing (MEASURE) and ship's tickler file processing
4. The ordering of both maintenance-related and nonmaintenance-related parts from supply

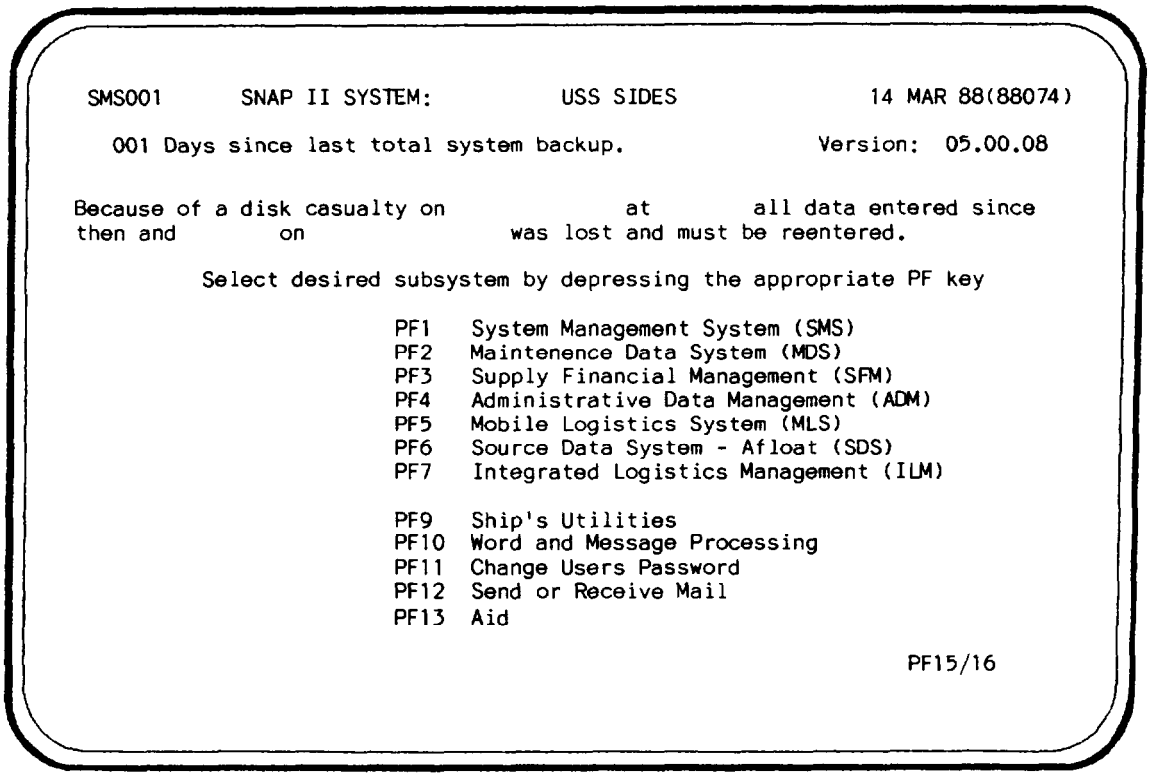

Figure 10-4.–Main menu screen for SNAP II.

5. Logistics support data file processing

6. Ship's equipment configuration file maintenance

7. The tracking of maintenance actions for an availability

8. Printed management reports

9. On-line report display of maintenance actions

10. Pretransmittal review processing

11. CSMP reporting process for off-ship reporting

12. Access to the ship's COSAL

Figure 10-5 shows the main menu of the MDS. This is the screen you will see after the main screen for the whole system, as given in figure 10-4. The subsystem manager for the MDS is usually the ship's 3-M coordinator.

Supply and Financial Management Subsystem

The SFM is an interactive subsystem that supports requirements processing, inventory management, financial management, and supply control. The requirements processing functions provide for the input, issuing, ordering, status tracking, receipt, and storage of material requirements. Automated requisition output capability for single line item material requests is also provided. The inventory management functions encompass the COSAL allowance items, as well as demand-based allowance items. The financial aids management functions provide the abilities to make obligation and grant adjustments; process Summary Filled Order Expenditure Difference Listing transactions. This part of the subsystem can produce various reports, including the Budget/OPTAR Report and Summary, financial transmittals for specified fiscal year(s), and the Supply, Edit, Audit and SIM (SEAS) system report. Supply control functions allow users to view reports or print transaction ledgers. The supply officer is the manager of the SFM subsystem. He or she is able to control user access, constants updates, and requisition history tape processing. This is the only subsystem that directly interacts with the MDS to provide requirement entry capabilities and COSAL data base maintenance.

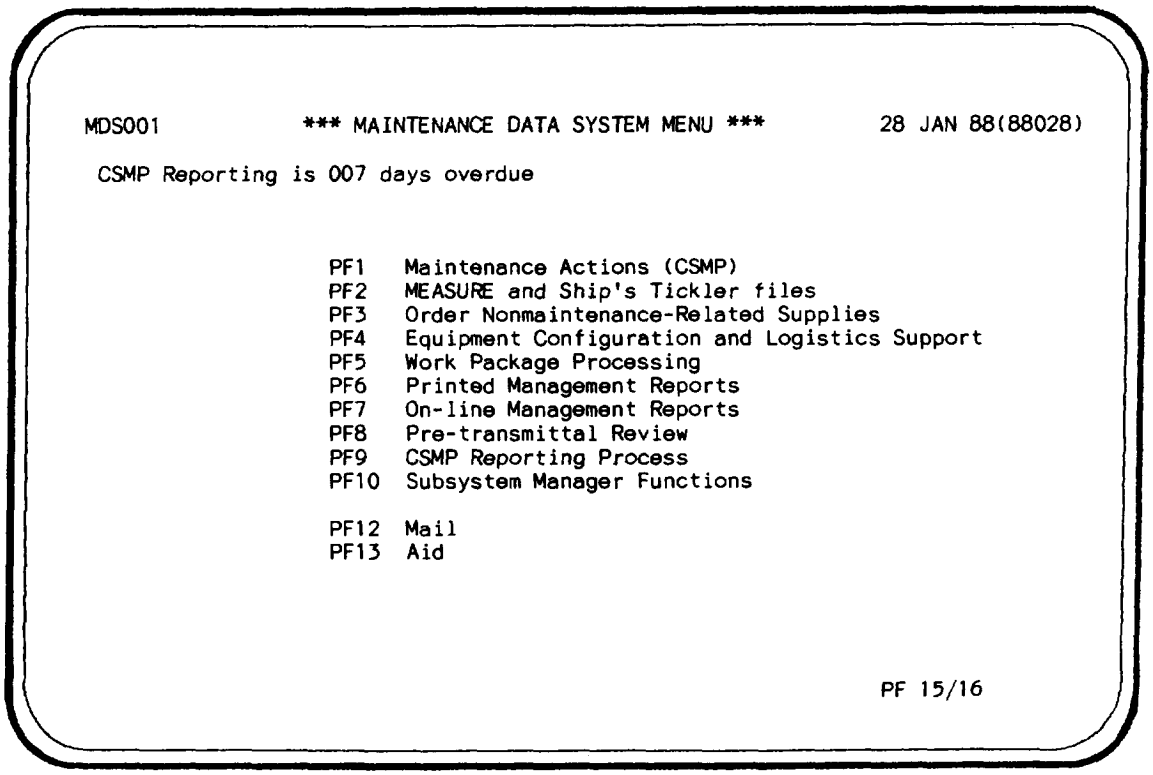

Figure 10-5.—Maintenance data subsystem menu.

Figure 10-6 shows the main menu of the SFM subsystem.

Administrative Data Management

The ADM subsystem of the SNAP II system is an interactive system that supports the ship's internal administration of the manpower management function. The manpower management function takes in the administration of shipboard personnel assignments, career development, retention, health, and morale. The overall objective of this subsystem is to reduce the manual administrative workload and improve the quality of your ship's internal administration. The subsystem manager is the administration officer. Figure 10-7 shows the main menu of the ADM subsystem.

Mobile Logistics Support Force

Mobile Logistics Support Force (MLSF) subsystem (also called Mobile Logistics Support [MLS] subsystem as per NAVSUP P-485) provides the capability to manage the operations in the area of loadouts, issuing customer requirements, invoicing, financial and statistical reporting, reordering, and all functions related to combat logistics force (CLF) operations. The subsystem manager is the supply officer. This subsystem has been implemented on board certain types of ships, such as AORs, AOEs, and AOs.

Integrated Logistics Management

The Integrated Logistics Management (ILM) subsystem allows assigned shipboard personnel, under the supervision of shore-based integrated logistics overhaul (ILO) team members to refine shipboard inventories of repair parts. You can update related stock records consistent with prescribed allowances or other stockage objective criteria. You can also identify material deficiencies or excesses. An ILO that is designed to improve the supply readiness of your ship entails the off-load, identification, and inventory of shipboard stocks of repair parts, disposition of excesses, requisitioning of deficiencies, and the reload and restorage of allowed items in authorized quantities. ILOs are performed for ships designated and scheduled by your TYCOM. The subsystem manager for the ILM is the supply officer. Figure 10-8 shows the menu for this

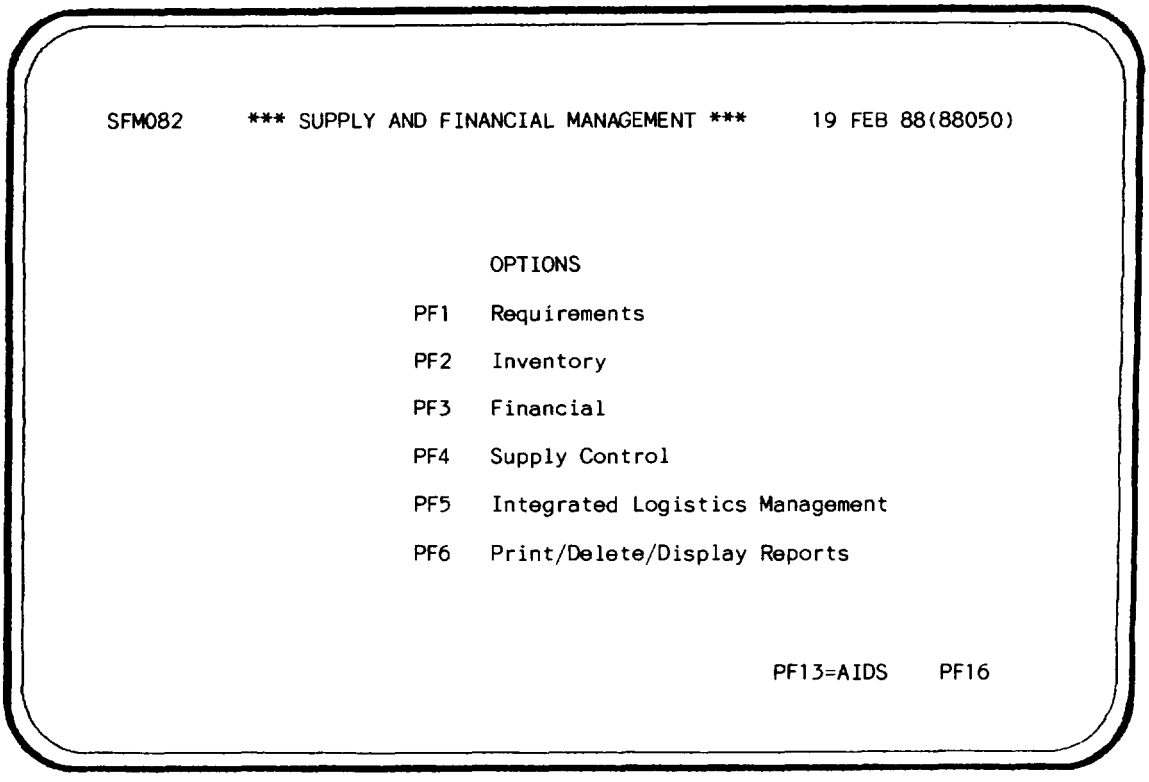

Figure 10-6.-SUPPLY and financial management subsystem menu.

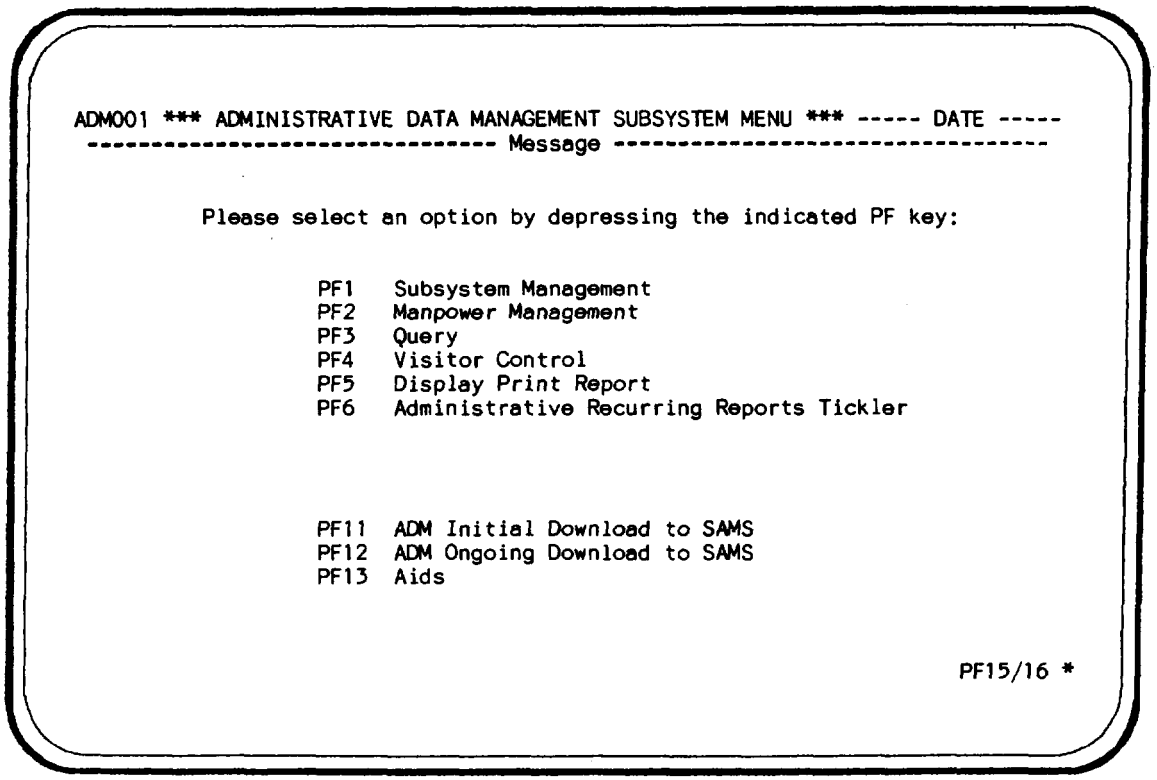

Figure 10-7.—Administrative data management subsystem menu.

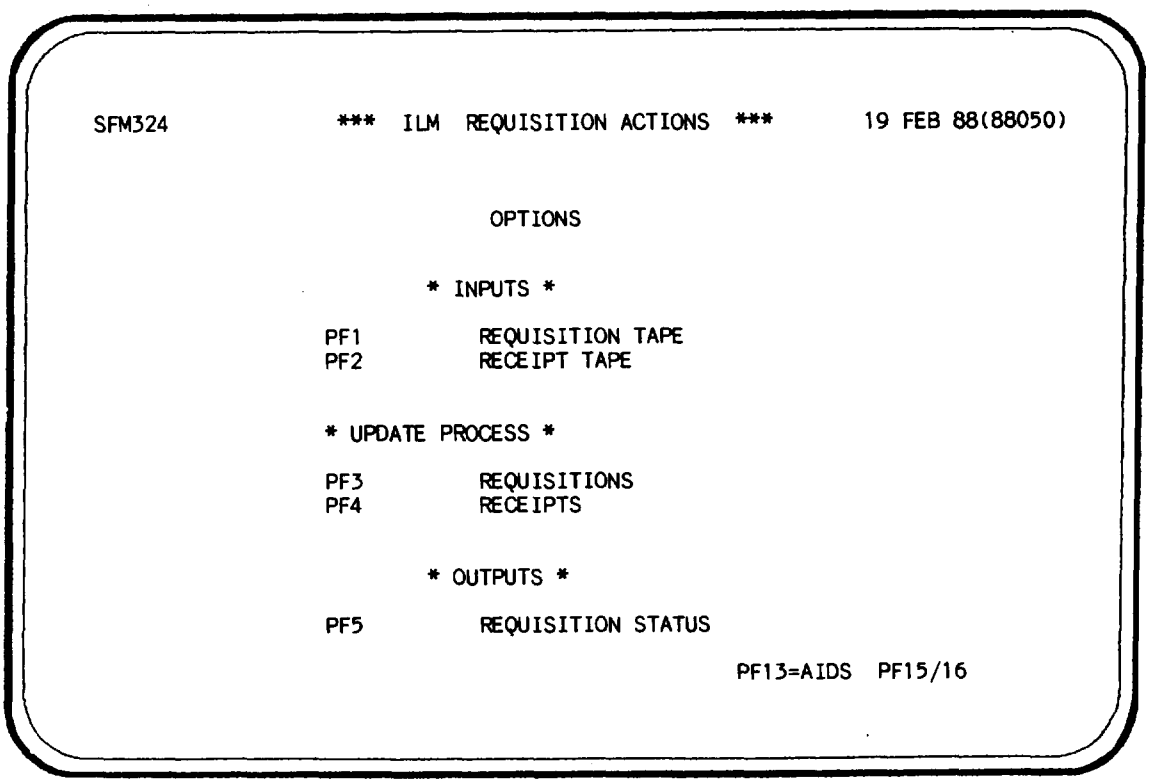

Figure 10-8.—ILM menu screen.

subsystem. For you to get to this screen you have to enter through the main menu for the SFM subsystem (choosing option PF5) shown in figure 10-6.

SUBSYSTEMS RELATIONS

The various subsystems that make up SNAP II are somewhat related to each other. For instance, the SMS subsystem basically allows the user access to all the other subsystems. Also, the MDS and the SFM subsystems interact directly with each other. Otherwise, all the other subsystems work independently of each other. However, when you request a printout of a report or file, you must go to the SMS to actually get the system to print out the requested file or report. Each one of the subsystem managers is responsible for entering all users into their subsystems.

SECURITY

The SNAP II system supports both access security and functional security within each subsystem. The system is based on the concept of a user's authority to perform a given set of functions and makes only this set of functions available to the user. This involves not only exclusion from execution outside this set but also the support of a menu-driven system that tailors the menu for each person. Each subsystem provides a specific security mechanism appropriate to its function.

Since everyone aboard your ship is a potential user of some functions in SNAP II, a flexible facility accordingly controls particular user access to the system. One very important thing to remember is that when you use the system, do not let anyone use your password. You could have greater access to the system than he or she might have. You should change your password periodically as per your TYCOM directives.